Task 2.3.1R

Bakersfield-to-Los Angeles High-Speed Train Alignments/Stations Screening Evaluation

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August 21,2001

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S.0 SUMMARY

Following adoption of a *Final Business Plan*[1] in 2000, the California High-Speed Rail Authority (Authority) recommended the state proceed with implementation of a statewide high-speed train system by initiating the formal state and federal environmental review process through the preparation of a state program-level Environmental Impact Report (EIR) and a federal Tier I Environmental Impact Statement (EIS) or Program EIR/EIS. The Authority is the state lead agency for the California Environmental Quality Act (CEQA) and the Federal Railroad Administration (FRA) is the federal lead agency for the National Environmental Policy Act (NEPA). As part of the Program EIR/EIS, a number of project alternatives will be evaluated including a High-Speed Train Alternative. Within the High-Speed Train Alternative, there is a range of high-speed train alignment and station location options to be considered.

The purpose of this High-Speed Train Alignments/Stations Screening Evaluation is to consider all reasonable and practical options within the Bakersfield-to-Los Angeles corridor at a consistent level of analysis and focus the Program EIR/EIS on those alignment and station options that best attain the following objectives established by the Authority.

- Maximize Ridership/Revenue Potential
- Maximize Connectivity and Accessibility
- Minimize Operating and Capital Costs
- Maximize Compatibility with Existing and Planned Development
- Minimize Impacts to Natural Resources
- Minimize Impacts to Social and Economic Resources
- Minimize Impacts to Cultural Resources
- Maximize Avoidance of Areas with Geological and Soils Constraints
- Maximize Avoidance of Areas with Potential Hazardous Materials

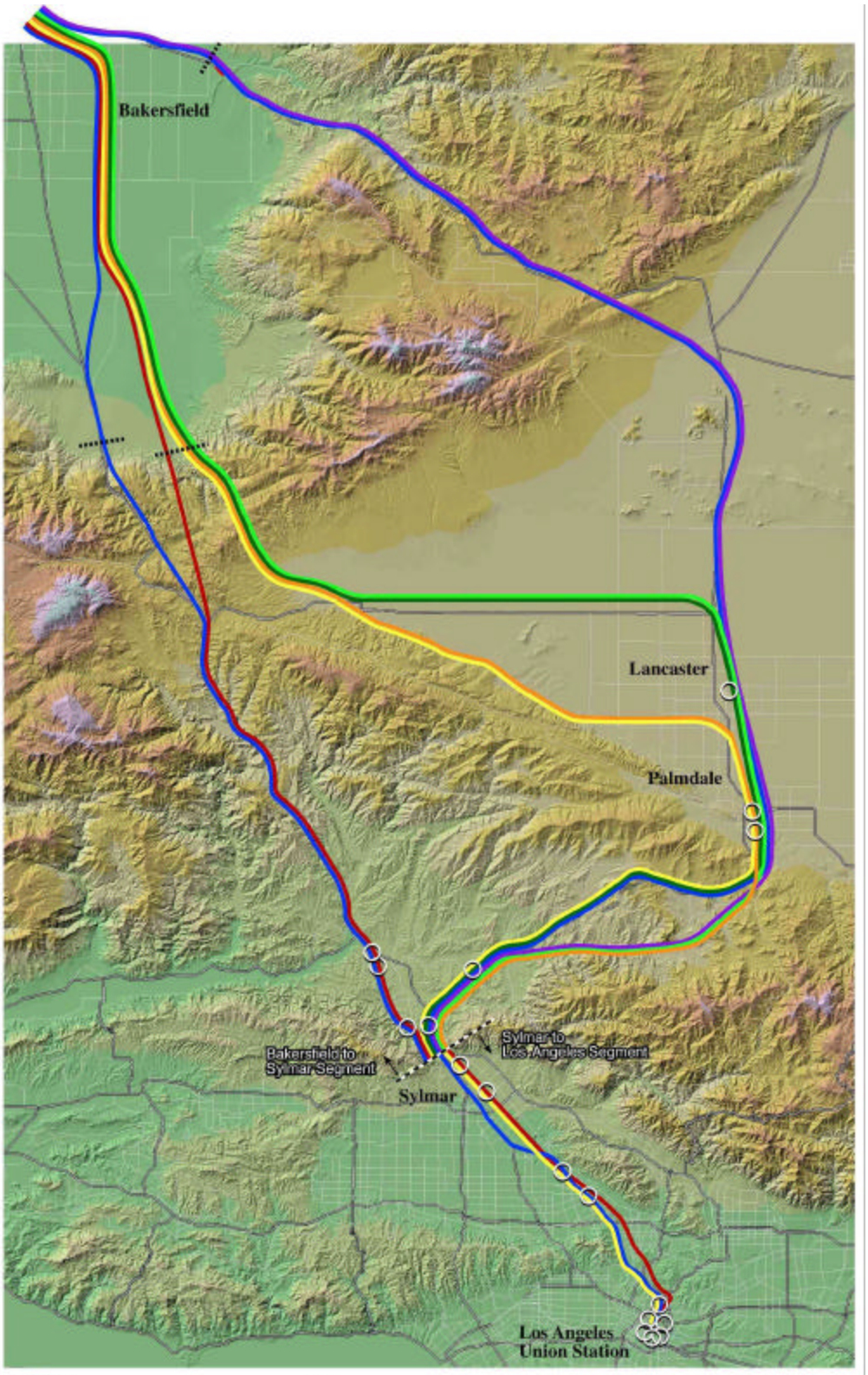
This alignment and station screening evaluation was accomplished through the following key activities.

- Confirmation/reconsideration of past alignment and station decisions based on review of previous studies.
- Identification of alignment and station options not previously evaluated through meetings with elected officials and public agencies and through the environmental scoping process.
- Evaluation of alignment and station options using standardized engineering, environmental, and financial criteria and evaluation methodologies.
- Identification of the alignment and station options ability to attain defined objectives.

S.1 ALIGNMENT AND STATION OPTIONS STUDIED

The Bakersfield-to-Los Angeles corridor was divided into two segments for analysis purposes. These segments include: Bakersfield-to-Sylmar and Sylmar-to-Los Angeles. The alignment and station location options within these segments are summarized below and illustrated in **Figure S.1-1**.

[1] California High-Speed Rail Authority. *Building a High-Speed Train System for California, Final Business Plan*. June 2000.



High-Speed Train Alignments and Stations for the Bakersfield to Los Angeles Corridor

Figure S.1-1

S.1.1 Segment 1: Bakersfield-to-Sylmar (Figure S.1-2)

A total of eight alignment options were evaluated between Bakersfield and Sylmar. All alignment options for this segment would connect to the Sacramento-to-Bakersfield Corridor in Bakersfield. Two of the alignments, Options 1 and 2, were evaluated for two different grade options, a 2.5 percent gradient to optimize speed, power use and maintenance costs and a 3.5 percent gradient to minimize tunneling. The alignments evaluated included:

I-5 Alignments:

- Alignment Option 1 – Interstate 5 (I-5) Alignment: This alignment would extend east along the Union Pacific Railroad (UPRR) from a Bakersfield station, south along State Route 184 (SR-184)/Wheeler Ridge Road, and generally follow I-5 over the Tehachapi Mountains through Santa Clarita to Sylmar. Station locations considered along this route include Santa Clarita only. Within Santa Clarita there are three station location options: (1) State Route 126 (SR-126)/I-5, (2) Magic Mountain Parkway/I-5 and (3) The Old Road. (The Sylmar station location options at Roxford Street and Sylmar Metrolink Station are included in the Sylmar-to-Los Angeles Union Station segment, not the Bakersfield-to-Sylmar segment.)
- Alignment Option 1A – I-5 Alignment via Comanche Point: This alignment would extend east along the UPRR from a Bakersfield station, south along SR-184, then south-southeast to Comanche Point along an existing power easement, tunneling from Comanche point to the I-5 alignment, then generally following I-5 to Santa Clarita and Sylmar along the same route as Option 1. Station locations are the same as for Option 1.

State Route 58 (SR-58) Alignments:

- Alignment Option 2 – Soledad Canyon/SR-58: Following SR-58 east from Bakersfield, generally following SR-58 through the Tehachapis to Mojave, along UPRR through Antelope Valley, through Soledad Canyon and generally following State Route 14 (SR-14) from Santa Clarita to Sylmar. Station locations would include Antelope Valley and Santa Clarita. In the Antelope Valley there are three station locations: (1) Lancaster Metrolink Station, (2) Palmdale Transportation Center and (3) Palmdale Boulevard. In Santa Clarita there are two station locations: (1) Via Princessa and (2) San Fernando Road.
- Alignment Option 2A – SR-14/SR-58: Same as Option 2 but follows SR-14 instead of Soledad Canyon. Stations are located in Antelope Valley and Santa Clarita. Station locations are also the same as for Option 2.

Aqueduct Alignments:

- Alignment Option 3 – Soledad Canyon/SR-138: Alignments parallel to SR-138 were developed as a variation of the prior alignment that paralleled the California Aqueduct from the Tehachapi crossing to Palmdale. This SR-138 alignment would extend east along the UPRR from a Bakersfield station, south along SR-184, then south-southeast to Comanche Point along an existing power easement, tunneling under the Tehachapi mountains near the California Aqueduct, then veering to the east along SR-138 to the UPRR, through Soledad Canyon and generally following SR-14 from Santa Clarita to Sylmar. Station locations would include Antelope Valley and Santa Clarita. In the Antelope Valley there are three station locations: (1) Lancaster Metrolink Station, (2) Palmdale Transportation Center and (3) Palmdale Boulevard. In Santa Clarita there are two station locations: (1) Via Princessa and (2) San Fernando Road.
- Alignment Option 3A – SR-14/SR-138: Same as Option 3 but follows SR-14 instead of Soledad Canyon. Station locations are the same as for Option 3.

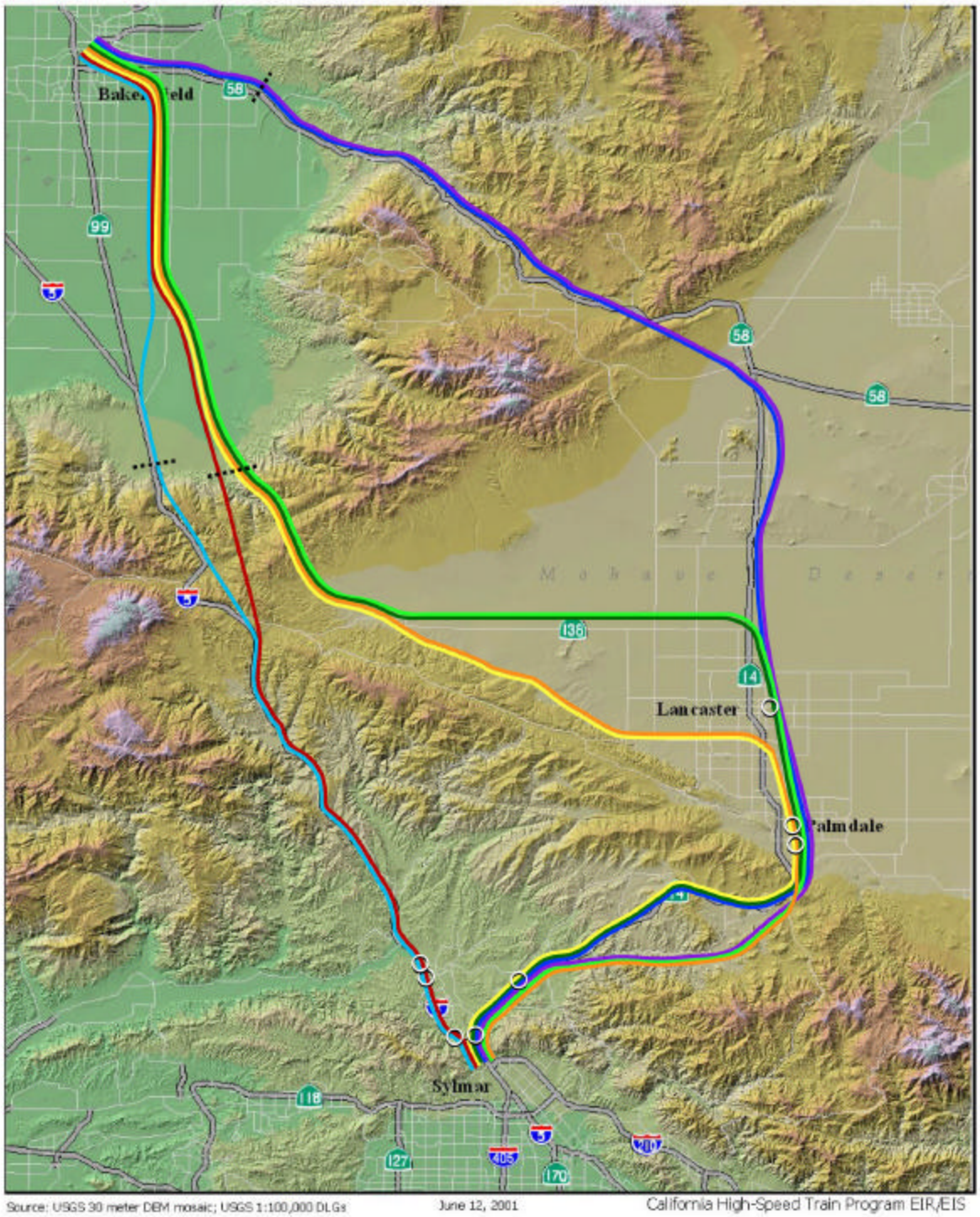

Bakersfield
58
99
58
58
Mojave Desert
138
14
Lancaster
Palmdale
Sylmar
118
5
405
170
Source: USGS 30 meter DEM mosaic; USGS 1:100,000 DLGs
June 12, 2001
California High-Speed Train Program EIR/EIS
Legend
Option 1
Option 1A
Option 2
Option 2A
Option 3
Option 3A
Option 4
Option 4A
Region Study Limit
Station Options
5 0 5 Miles
5 0 5 Kilometers
Bakersfield to Sylmar
Alignment Options

Figure S.1-2

- Alignment Option 4 – Soledad Canyon/Aqueduct: This alignment would extend east along the UPRR from a Bakersfield station, south along SR-184, then south-southeast to Comanche Point along an existing power easement, tunneling under the Tehachapi mountains near the California Aqueduct, generally following the Aqueduct to SR-14, through Soledad Canyon, and then generally following SR-14 from Santa Clarita to Sylmar. Station locations would include Antelope Valley and Santa Clarita. The station locations are the same as for Option 3, except that the alignment does not extend far enough north on the UPRR to include the Lancaster Metrolink Station site.
- Alignment Option 4A – SR-14/Aqueduct: Same as Option 4 but follows SR-14 instead of Soledad Canyon. Station locations would include Antelope Valley and Santa Clarita. The station locations are the same as for Option 4.

S.1.2 SEGMENT 2: SYLMAR-TO-LOS ANGELES (FIGURE S.1-3)

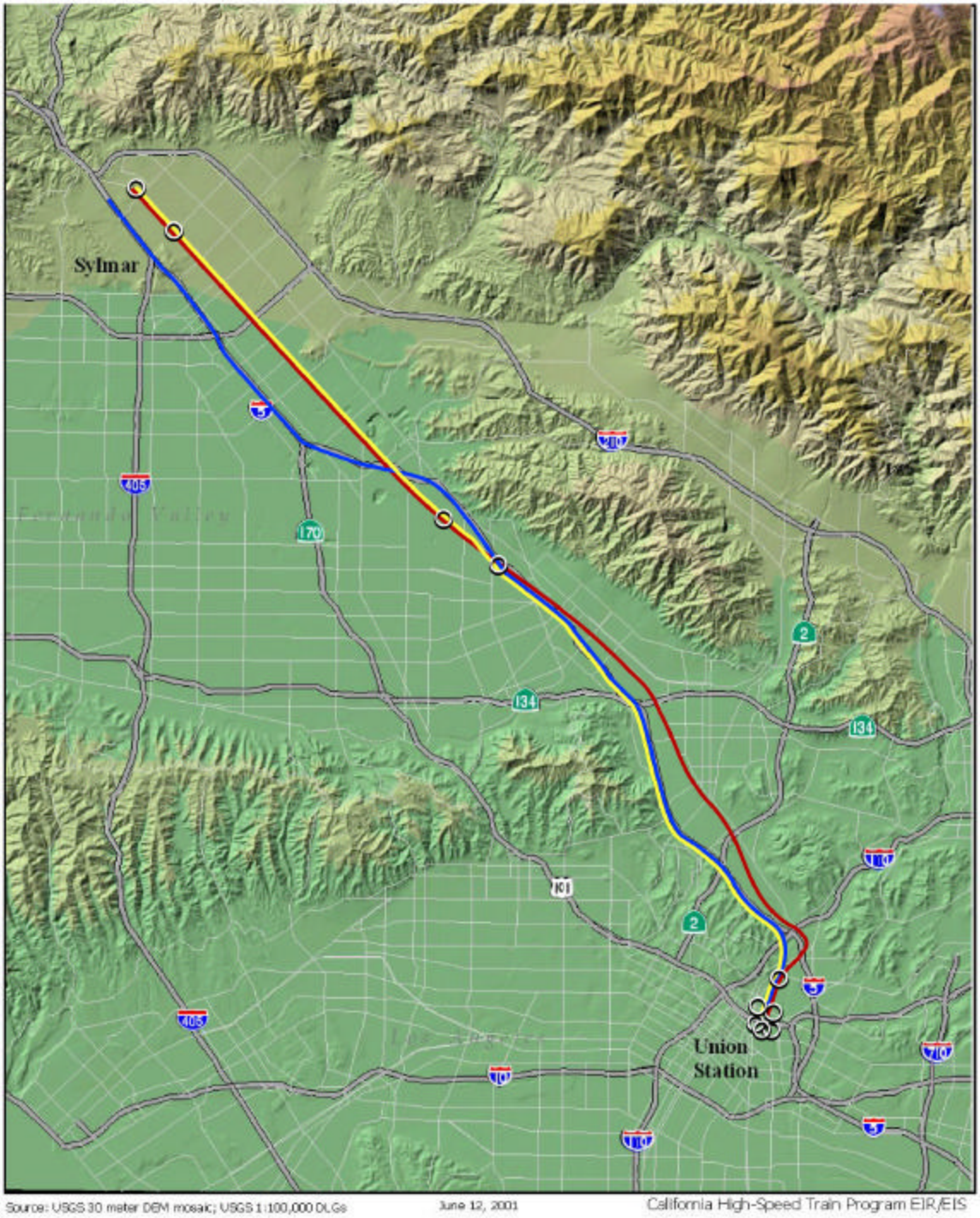
Two basic alignments and a hybrid of the two were evaluated between Sylmar and Los Angeles Union Station. All of the alignments are suitable for both steel wheel and maglev technology. The alignments were:

- Alignment Option 1 – Metrolink/UPRR: Generally follows existing railroad between Sylmar and downtown Los Angeles. Station locations include Sylmar, Burbank and the Los Angeles Union Station area. There are two station location options in Sylmar: (1) Roxford Street and (2) Sylmar Metrolink Station. The Burbank station locations include: (1) Burbank Airport and (2) Burbank Metrolink Station. The downtown Los Angeles station locations include: (1) Existing Union Station, (2) Union Station South (Through), (3) Union Station South (Stub), (4) LA River West, (5) LA River East and (6) the Cornfield Site.
- Alignment Option 2 – I-5 Freeway: This alignment option generally follows I-5 from Sylmar to downtown Los Angeles, but frequently diverges due to tight highway curvature that would severely compromise operating speed. Approaching downtown, it tunnels under Elysian Park. Station locations include Burbank and the Los Angeles Union Station area. There are no feasible Sylmar station sites. There is only one Burbank station location at Burbank Metrolink Station. There are two possible Los Angeles Station sites: (1) Existing Union Station and (2) Union Station South (Through).
- Alignment Option 3 – Combined I-5/UPRR: Follows the UPRR from Sylmar to Burbank Metrolink Station and then generally follows I-5 to a tunnel under Elysian Park to downtown Los Angeles. Station locations include Sylmar, Burbank and downtown Los Angeles. There are two station location options in Sylmar: (1) Roxford Street and (2) Sylmar Metrolink Station. The Burbank station locations include: (1) Burbank Airport and (2) Burbank Metrolink Station. The downtown Los Angeles station locations are limited to: (1) Existing Union Station and (2) Union Station South (Through).

S.2 ALIGNMENT AND STATION OPTIONS EVALUATION

S.2.1 Segment 1: Bakersfield-to-Sylmar

Because the study area for these alignments ended at the base of the north slope of the Tehachapis, information from the Bakersfield-to-Los Angeles Corridor was combined with information from the Sacramento-to-Bakersfield Corridor to provide the station to station data comparison. For the purposes of analysis, three connector alignments to Bakersfield were assumed. The two I-5 alignment options would connect to an alignment that generally follows Wheeler Ridge Road and SR-184, joining the Union Pacific (former Southern Pacific) (UP) east of downtown Bakersfield. The SR-58 alignments simply follow the UP into Bakersfield. The SR-138/Aqueduct alignments follow a power easement to SR-184 and then join the UP east of Bakersfield.



Sylmar to Union Station Alignment Options

Figure S.1-3

The primary distinguishing factor among the Bakersfield-to-Sylmar alignments was: whether or not the system should serve the Antelope Valley versus alignment cost, length and the effect of length on total travel time. The I-5 alignments are 84 to 87 miles (135 to 139 km) long while the six alignment options that traverse the Antelope Valley are 120 to 127 miles (192 to 203 km) long. Other important factors were total length of tunneling, length of individual tunnels, cost implications and environmental trade-offs of tunneling, as well as potential effects on natural and cultural resources and land use. All of the alignments would require tunneling to cross the Tehachapi Mountains.

Although they have travel times 10 to 12.6 minutes longer than the I-5 options, all of the other options provide an opportunity to serve the growing Antelope Valley. Since 1990 the cities of Palmdale and Lancaster have experienced extraordinary population growth of 69 and 22 percent, respectively. Of the six alignment options that cross the Antelope Valley, Options 3 and 3A, the SR-14/SR-138 alignment, would be more compatible with development and have fewer potential impacts to natural and cultural resources. As with all of the alignment options that traverse the Antelope Valley, the San Andreas Fault is crossed at grade by Options 3 and 3A. The two SR-58 alignment options are expected to require more extensive railroad relocation (including Metrolink from Palmdale to Lancaster and UPRR from Palmdale to Mojave), and may encounter cultural and historic resources along historic rail routes. These two alignment options also have many locations that incorporate minimum radius curves. However, the two SR-58 alignment options allow both the San Andreas and Garlock Faults to be crossed at grade, but only with the use of a 3.5 percent maximum grade to minimize tunneling. Although special tunnel designs can be used to cross faults, crossing at grade is generally preferable, primarily for ease of repairs. In the unlikely event that passenger evacuation became necessary, it would also be accomplished more easily at grade.

The six alignments that traverse the Antelope Valley, Options 2, 2A, 3, 3A, 4 and 4A, are numbered and grouped to reflect a basic route using Soledad Canyon and a variation that generally follows SR-14. The "A" designated options all follow SR-14 between Acton and Santa Clarita. The difference between these two variations is that the Soledad Canyon variants, Options 2, 3 and 4, tunnel through a rural canyon with extremely rugged terrain, private camping resorts and native habitat areas. The SR-14 variants, Options 2A, 3A and 4A generally follow the existing freeway and are largely in tunnel; however, there are three locations where the high-speed train would cross the freeway on bridges. These crossings have the potential to result in land use impacts in this rapidly developing area. Because the areas they traverse and the types of potential impacts are so very different, concluding that one route is less impacting than the other in the 2.5 percent maximum grade configuration is extremely difficult. A 3.5 percent grade maximum variant, to minimize tunneling, was also considered for the portion of the alignments through Soledad Canyon. This variant is discussed below.

Among the Aqueduct alignments, alignment Options 4 and 4A have the highest potential for cultural/historic resource impacts (Native American sites in foothills), higher costs of $25 to 100 million and higher exposure to seismic risk. Of greatest concern is that Options 4 and 4A closely parallel the San Andreas Fault for a long distance, creating a long segment subject to high seismic shaking and potential ground movement. The length of this segment would subject trains to high ground motion for a longer distance and make the use of early warning signals to stop trains more difficult. The likelihood of a train being on top of or very near a fault during a seismic event is much lower for the perpendicular fault crossings found on the other alignment options. Options 4 and 4A would also impact existing development that has occurred on the western side of Palmdale, against the mountains **(Figure S.2-1)**. As a result, new alignment variations were identified, the SR-138 alignment Options 3 and 3A. **Figure S.2-2** shows the straight, flat SR-138 corridor running east-west across the Antelope Valley. These Options move the Aqueduct alignment to the north, away from the San Andreas fault, away from existing development and away from the foothill area more likely to have Native American cultural resource sites, substantially reducing the potential for impacts.

Figure S.2-1 Options 4 and 4A, along the existing California Aqueduct, have abutting development in Palmdale.

Figure S.2-2 Options 3 and 3A use straight, level SR-138 corridor across a rural area.

All of the Bakersfield-to-Sylmar alignment options will have to cross prime farmland, existing irrigated farmlands and extensive floodplain areas south and east of Bakersfield. In comparison, the two SR-58 alignment options cross less floodplain in the Central Valley, but cross more floodplain than the other alignment options in the Antelope Valley (an extensive area north of Lancaster), making them roughly comparable for this factor. The SR-58 alignment options, however, have less of an impact on prime farmland, since these two options would have a shorter run across the Valley floor where farmlands are found. However, the SR-58 alignments cross extensive existing grazing land in the Tehachapis.

Alignment Options 1 (I-5 Alignment) and 2 (Soledad Canyon/SR-58) were evaluated for two grade variants **(Figures 2.2-3 and 2.2-4)**, one with an effort to minimize tunneling (using a maximum grade of 3.5 percent) and one with an effort to optimize operations, resulting in flatter and longer tunnels (maximum grade 2.5 percent). Even so, tunneling cannot be avoided altogether. Both the minimize tunneling variant for Option 1 and the one for Option 2 include lengthy tunneling and Option 1 still includes individual tunnels longer than 6 miles (9.6 km). Tunnels longer than 6 miles (9.6 km) are presumed to be long enough to require a separate evacuation tunnel due to tunnel length and depth. It should be noted that the minimize tunneling, 3.5 percent variant for Option 2 can also be applied in part to Option 2A, since a portion of the design changes occur to the portion of alignment Option 2 that traverses the Tehachapi Mountains. This segment is common to both alignment Options 2 and 2A. While the two minimize tunneling variants for Options 1 and 2 reduce construction costs and reduce some of the uncertainty posed by subsurface construction, they also present a number of problems. These include: additional right-of-way requirements for tunnel portals (both construction right-of-way and permanent right-of-way), substantially greater natural resources impacts where tracks come to grade (especially crossing jurisdictional drainages, particularly in natural areas in the Tehachapi Mountains and in Soledad Canyon), potential operations impacts (lower operating speeds, increased power demand and higher maintenance costs), increased visual and development impacts, indirect impacts to historic resources and increased construction impacts.

In comparison to the Option 1 variant at 2.5 percent grade, the 3.5 percent grade variant to minimize tunnels would require additional right-of-way to construct and access 26 tunnel portals. Access roads would be required in sensitive habitat areas and will result in habitat disturbance and visual intrusion. In Santa Clarita, more surface right-of-way would be required in a rapidly developing area. The 3.5 percent maximum grade variant also traverses at grade through a currently developed area adjacent to Castaic Lagoon. Just south of the San Andreas Fault, the 3.5 percent variant would introduce a major visual element in a rural area, although this location is adjacent to a large off-road vehicle park. The 3.5 percent variant for Option 1 would be at grade across more jurisdictional waters than the 2.5 percent variant and would therefore have a greater potential for impacts. It would also be at grade across National Forest lands and floodplains in Tehachapis and would cross tributaries to Pyramid Lake. The increased length of the alignment above grade in sensitive habitat areas means a higher potential for impacts to endangered species. A key concern is the increased amount of aboveground power lines and catenary lines with the 3.5 percent grade variant. The increased amount of alignment at grade and the increased number of tunnel portals provide additional opportunities to run power to the alignment and lengthen the amount of catenary lines exposed in sensitive habitat areas. This concern arises from the number of endangered California condors that have been killed due to making contact with power lines. The minimize tunneling variant is at grade within the range of these endangered birds.

In addition to having a lower construction cost, the 3.5 percent variant for Option 2 (Soledad Canyon/SR-58) would allow both the San Andreas and Garlock Faults to be crossed at grade. This minimize tunnel variant has good access to tunnel portals. However, it would be at grade east of Keene, immediately adjacent to the Tehachapi Loop on the existing UP railroad, just north of the town of Tehachapi and along SR-58 in a number of other locations. These at-grade segments would result in severance of grazing areas, visual impacts, indirect impacts to historic resources and additional crossings of jurisdictional waters. In Soledad Canyon, this variant would also cross jurisdictional wetlands and

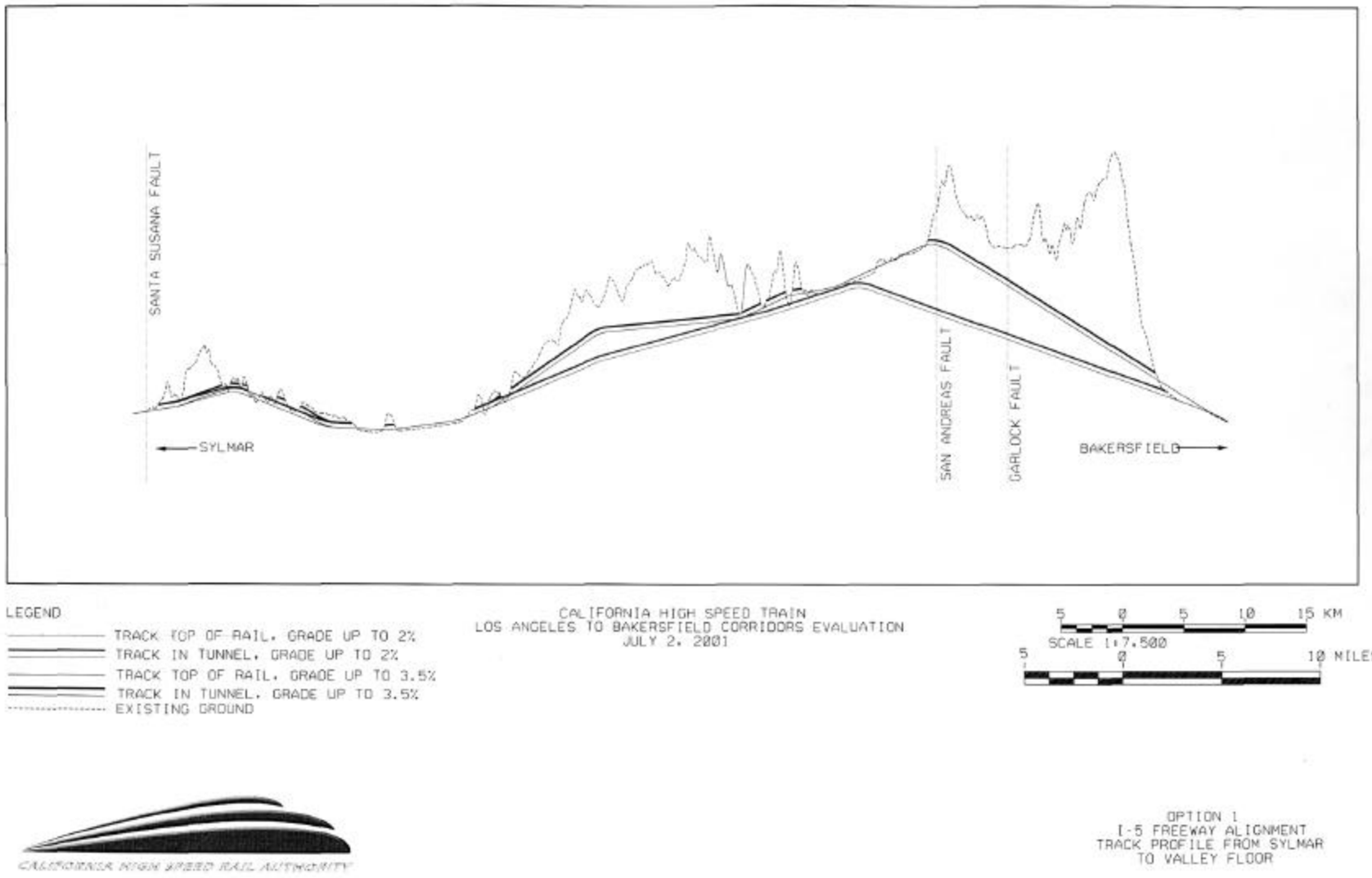


Figure S2.2-3
2.5 and 3.5 Percent Maximum Grade Variants for Bakersfield-to-Sylmar Alignment Option 1

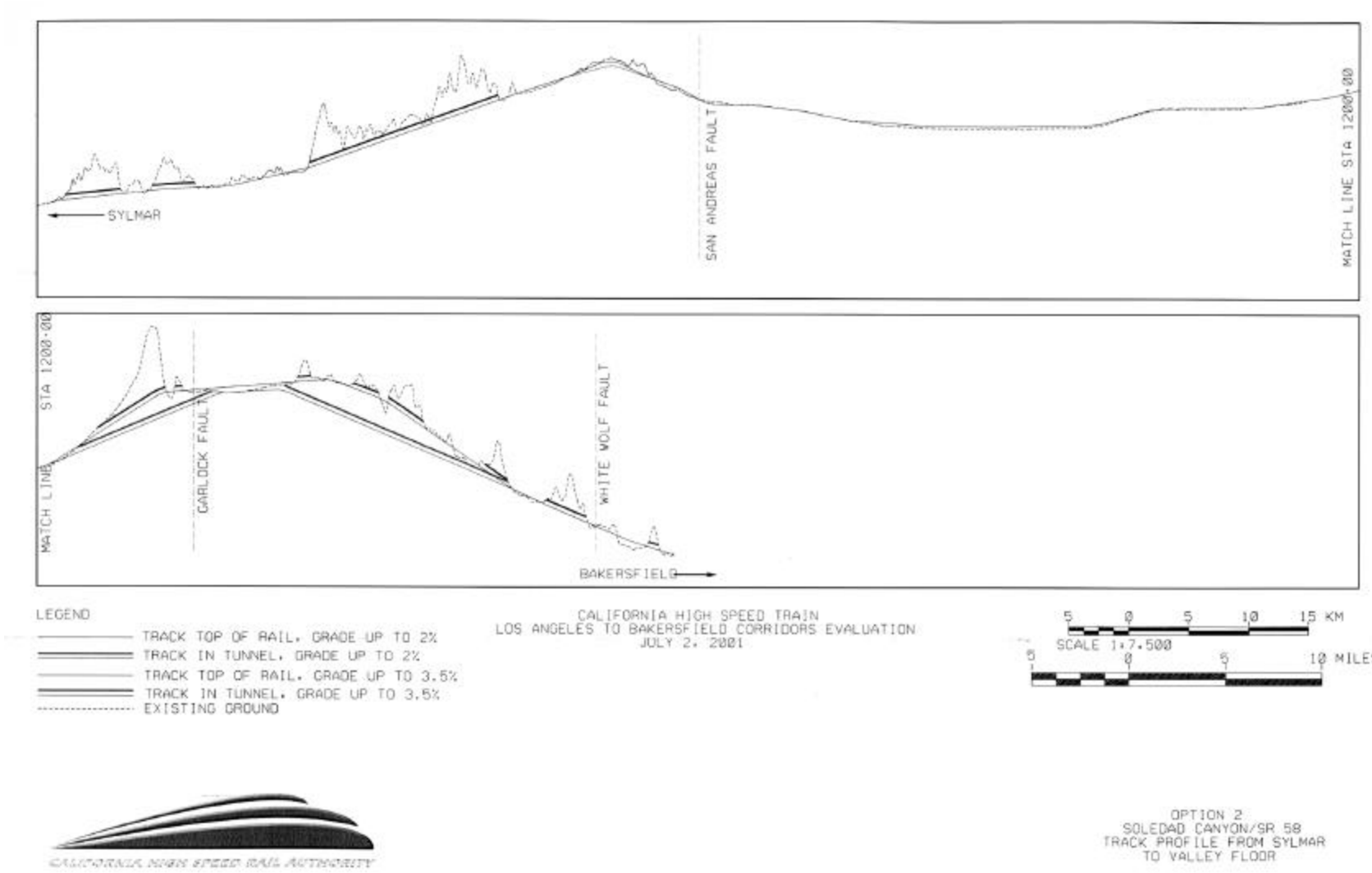


Figure S2.2-4
2.5 and 3.5 Percent Maximum Grade Variants for Bakersfield-to-Sylmar Alignment Option 2

floodplain areas, traverse National Forest land at grade, cause impacts to habitats and sensitive species, and substantial visual intrusion in a rural context.

Costs for the minimize tunneling variant would be $800 million to $1.1 billion less (for Options 1 and 1A) compared to the costs for the flatter, longer tunnel variant. For Options 2 and 2A, the minimize tunneling variant would reduce costs by as much as $1.1 to $1.2 billion. Note that different assumptions for tunneling unit costs and vertical profile could potentially lead to an even greater disparity of costs between the 3.5 percent grade and the 2.5 percent grade variants. Additional analysis is necessary to gain a better understanding of and more confidence in the appropriate tunneling approach (e.g., use of tunnel boring machine versus drill and blast techniques) and associated cost estimates. Minimizing tunnels increases travel time for Option 1 by 1.1 minutes and for Option 2 by 0.1 minute. Operating speeds are decreased from 220 mph (350 kph) to 165 mph (264 kph) for 10 miles (16 km) and to 195 mph (312 kph) for 6 miles (9.6 km), respectively. There would be a greater energy demand to achieve these lower speeds. The number of tunnels on Option 1 increased from 4 to 13, with length of tunneling reduced from 45 miles (72 km) to 34 miles (54.4 km). The length of the longest tunnel decreased from 36 miles (55 km) to 12 miles (19 km). The number of tunnels for Option 2 increased from 6 to 9 while the length of tunneling was reduced from 41 miles (66 km) to 21 miles (34 km). As trade-offs between tunneling, grade and environmental impacts are further refined, further reduction of total tunneling may be possible. Early studies achieved total tunnel lengths of 26 miles (42 km) and 11 miles (18 km) on the I-5 and SR-58 alignments respectively, using a 3.5 percent maximum grade.

S.2.2 SEGMENT 2: SYLMAR-TO-LOS ANGELES

The most important factors that distinguish among these alignments are travel times and land use/right-of-way acquisition impacts and costs. All alignment options within this segment have similar lengths, but travel times vary greatly. Option 1, the Metrolink/UPRR alignment option, would result in substantially greater travel time (13 to 21 minutes longer) due to the need to negotiate tight curves on the southern portion of the segment. Option 2, the I-5 Freeway alignment option, would have the potential for lowest travel time, but would involve higher costs and be substantially less compatible with development. It would also require tunneling under Elysian Park and construction of extensive aerial structure. Because it frequently diverges from I-5 proper due to the tight curvature of the freeway, it would involve very extensive land use impacts and substantial right-of-way acquisition in heavily urbanized areas. The Metrolink/UPRR alignment, Option 1, would be least costly, since construction would be at grade between downtown Los Angeles and Burbank. Trenching the remainder of the alignment up to Sylmar would accommodate numerous grade crossings north of Burbank. The I-5 alignment option would be most costly, approximately $700 million more than the Metrolink/UPRR alignment option, since it involves tunneling and significant aerial structure. Option 3, the Combined I-5/UPRR, is approximately $500 million more than the Metrolink/UPRR alignment option, as it still requires some tunneling. The previous alignment studied in this segment is bracketed by these new variants. It generally falls between Options 1 and 3 for most objectives. Option 1, the Metrolink/UPRR alignment, provides opportunities for incremental implementation of high-speed service, since it utilizes the existing railroad right-of-way.

S.2.3 Station Locations Evaluation

Five basic station locations were considered south of Bakersfield to downtown Los Angeles including the Antelope Valley, Santa Clarita, Sylmar, Burbank and Los Angeles Union Station. The specific locations at each site were:

Antelope Valley **(Figures S.2-5 and S.2-6)**:

- Station Location Option 1 – Lancaster Metrolink Station: Not feasible with Aqueduct alignment Options 4 and 4A.

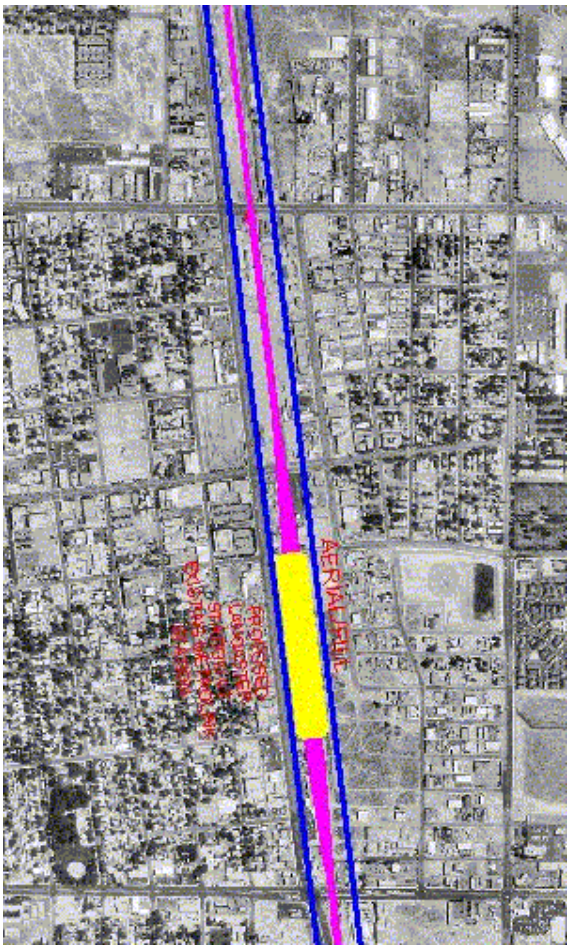


Figure S.2-5 Antelope Valley Station Option 1, Lancaster Metrolink Station

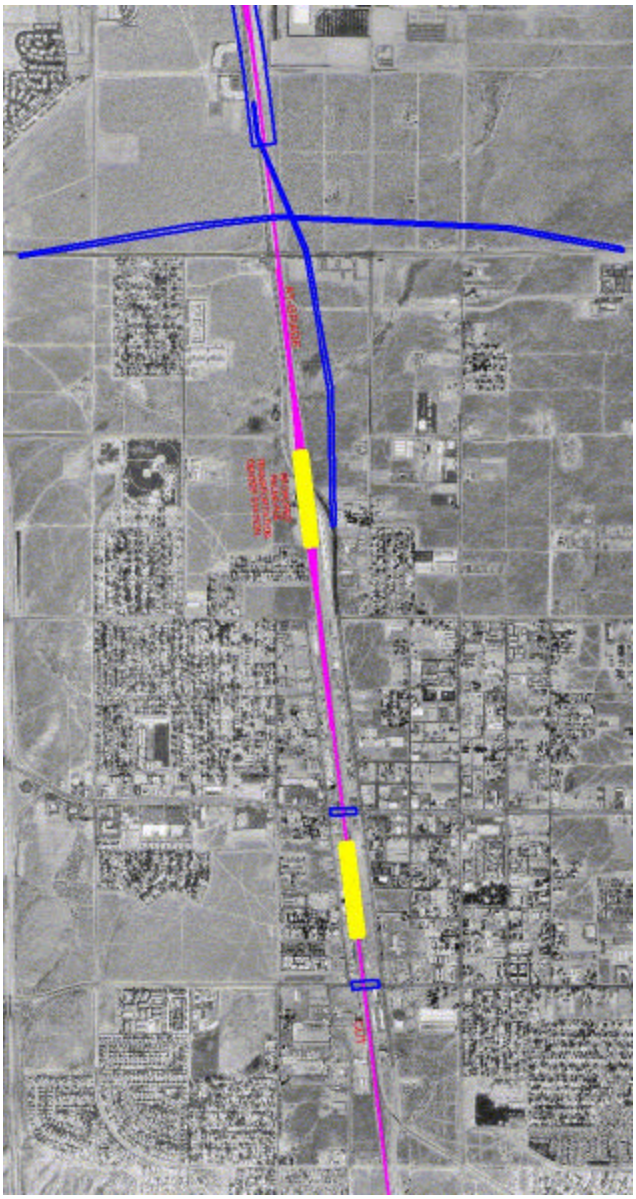


Figure S.2-6 Antelope Valley Station Options 2 and 3, Palmdale Transportation Center (top) and Palmdale Boulevard

- Station Location Option 2 – Palmdale Transportation Center
- Station Location Option 3 – Palmdale Boulevard

The two Palmdale locations have the potential to serve a higher population and would result in fewer social and economic impacts, although there are more soils and development constraints in the Palmdale area. Option 3, at Palmdale Boulevard presents the most constraints. It has poor connectivity to freeways and airports, no existing or planned Metrolink stop and the potential for greater impacts to historic resources. It also is located in a 500-year floodplain. The Lancaster Metrolink Station and Palmdale Boulevard sites have the highest potential to affect minority and/or low-income populations of the three sites considered. Since the Lancaster site lies north of the point where the alignment diverges from the railroad, this station site is not a viable option for the two Aqueduct alignment Options 4 and 4A. The Palmdale Transportation Center site has strong political support from local government officials from both Palmdale and Lancaster, who seek to integrate high-speed trains with other the modes of travel to be available at this planned facility. However, the adjacent neighborhood has voiced its opposition due to concerns about traffic, noise, air quality and crime. It is also on the fringe of an area that may be habitat for sensitive species.

Santa Clarita **(Figures S.2-7, S.2-8, S.2-9 and S.2-10)**:

- Station Location Option 1 – SR-126/I-5: Feasible with I-5 and I-5/Comanche Point Alignments.
- Station Location Option 2 – Magic Mountain Parkway/I-5: Feasible with I-5 and I-5/Comanche Point Alignments.
- Station Location Option 3 – The Old Road: Feasible with I-5 and I-5/Comanche Point Alignments.
- Station Location Option 4 – Via Princessa/SR-14: Feasible with all Antelope Valley alignments.
- Station Location Option 5 – San Fernando Road/SR-14: Feasible with all Antelope Valley alignments.

Options 3 and 5 have potential fatal flaws, with no existing road access and locations in areas being considered for environmental conservation or within a National Forest. Option 1 is located in a flood prone area of agricultural soils, creates potential development conflicts and visual quality impacts. Options 2 and 4 appear to be best relative to environmental impacts, although Option 4 would result in potential development conflicts and Option 2 has a lower catchment potential and is located in an area of oil extraction.

Sylmar **(Figure S.2-11)**:

- Station Location Option 1 – Roxford Street
- Station Location Option 2 – Sylmar Metrolink Station

Due to the convergence of five major freeways (I-5, SR-14, I-210, I-405 and SR-118) in the Sylmar area and the close proximity of a sixth (SR-170), the Sylmar station sites were introduced for this regional study. They are intended for consideration as a possible substitute for either or both the Santa Clarita and Burbank stops. In 1990 over 3.2 million people and 1.7 million employees were within a 20-mile radius of the Sylmar station sites. Of the three primary factors that distinguish among these two station sites the existing Metrolink Station has greater connectivity and lower costs, while the Roxford Street location would result in less potential to affect minority and low-income populations.

Burbank **(Figures S.2-12 and S.2-13)**:

- Station Location Option 1 – Burbank Airport: On San Fernando Road in the northwest quadrant of the Airport; not feasible with the Sylmar-to-Los Angeles segment Option 1 along I-5.
- Station Location Option 2 – Burbank Metrolink/Media City: Feasible with all Sylmar-to-Los Angeles alignment options.

Each of the two Burbank station locations has a variety of advantages and disadvantages. Both station locations are in industrial areas. The Metrolink Station would result in higher construction costs due to its

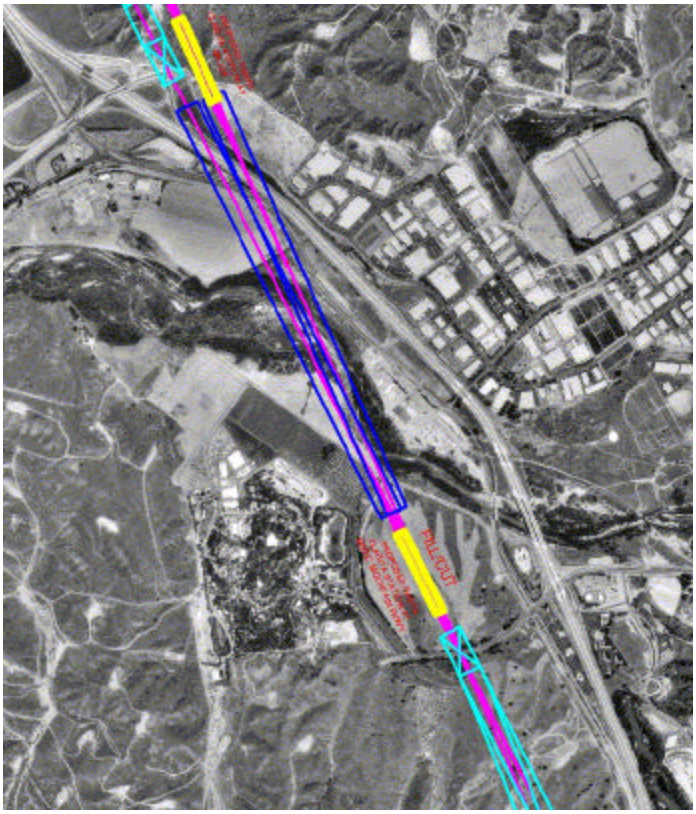


Figure S.2-7 Santa Clarita Station Options 1 and 2, SR-126/I-5 and Magic Mountain Parkway/I-5

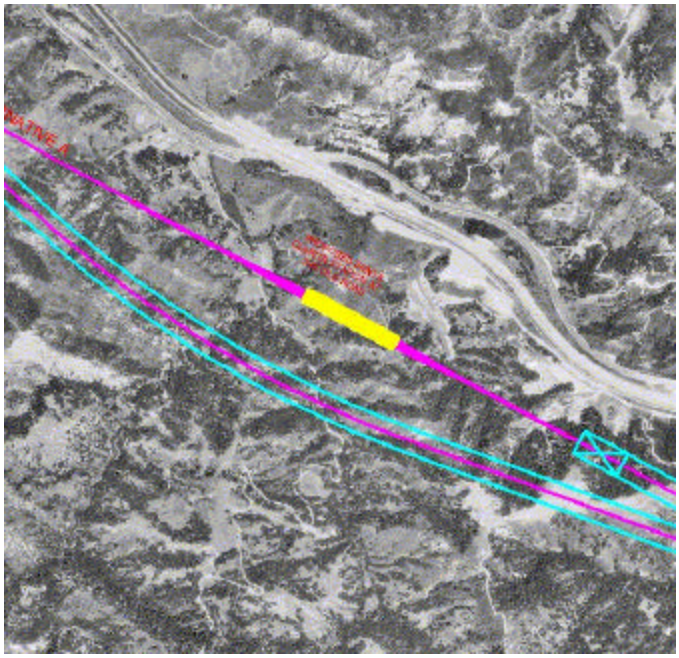


Figure S.2-8 Santa Clarita Station Option 3, The Old Road